

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (previously presented) A three-dimensionally networked silica composed of silica particles of 100 nm or less connected by bridge chains comprising an aliphatic, aromatic, polyimine, peptide, or polyether group.

Claims 2-3 (canceled)

4. (previously presented) A three-dimensionally networked silica according to claim 1, wherein the reactions connecting silica particles are carried out in solvent selected from the group consisting of toluene, xylene, octane, and butanol at a temperature from 40 to 150°C with refluxing.

5. (previously presented) A three-dimensionally networked silica according to claim 1, wherein silica particles are connected by reacting silica particles coupled with trialkoxy silane having an amine substituent with another silica particles coupled with trialkoxy silane having a glycidyl substituent.

6. (previously presented) A three-dimensionally networked silica according to claim 5, wherein reacting pairs in the connecting reactions are amine and chloride, glycidyl and mercapto, glycidyl and hydroxyl, or amine and mercapto groups.

7. (previously presented) A three-dimensionally networked silica according to claim 5, wherein coupling reactions between silica particles and silane and between silane-coupled silica particles are carried out in toluene by refluxing.

8. (original) A three-dimensionally networked silica according to claim 5, wherein the silane having an amine substituent is 3-aminopropyltriethoxy silane and the silane having a glycidyl substituent is 3-glycidoxypropyltrimethoxy silane.

9. (original) A three-dimensionally networked silica according to claim 5, wherein the silane having an amine substituent is 3-aminopropyltrimethoxy silane and the silane having a chloride substituent is 3-chloropropyltrimethoxy silane.

Claims 10-11 (canceled)

12. (previously presented) A three-dimensionally networked silica according to claim 1, wherein silica particles are connected by reacting silane-coupled silica particles with connecting materials with multifunctional groups on their ends in toluene by refluxing.

13. (previously presented) A three-dimensionally networked silica according to claim 12, wherein the connecting materials are selected from the group consisting of diamines, dichlorides, diisocyanates, and dicarboxylic acids.

Claim 14 (canceled)

15. (previously presented) A three-dimensionally networked silica according to claim 12, wherein connecting materials are diisocyanates having methylene chains of C₆-C₁₀₀.

Claims 16-17(canceled)

18. (currently amended) A three-dimensionally networked silica according to claim 12, wherein the silane ~~having a glycidyl substituent~~ is 3-glycidyloxypropyltrimethoxy silane, and the connecting materials are diaminoalkanes or diisocynatoalkanes.

19. (currently amended) A three-dimensionally networked silica according to claim 12, wherein the silane ~~having a glycidyl substituent~~ is 3-glycidoxypolypropyltrimethoxy silane, and the connecting materials are polyethyleneimines.

20. (previously presented) A three-dimensionally networked silica according to claim 19, wherein the skeletal of connecting materials is polyether.

21. (previously presented) A three-dimensionally networked silica according to claim 1, wherein silica particles are connected by reacting silica particles directly with multifunctional connecting materials in toluene by refluxing.

22. (previously presented) A three-dimensionally networked silica according to claim 21, wherein the multifunctional connecting materials are dichlorides.

23. (previously presented) A three-dimensionally networked silica according to claim 21, wherein the multifunctional connecting materials are diisocyanates.

24. (previously presented) A three-dimensionally networked silica according to claim 5, wherein non-reacted amine groups are inactivated by reacting with C₄-C₁₂-chloroalkane in toluene and refluxing.

Claims 25-29 (canceled)

30. (new) A three-dimensionally networked silica composed of silica particles of 100 nm, wherein the silica particles are connected by reacting silane-coupled silica particles with connecting materials selected from the group consisting of diamines, dichlorides, diisocyanates, and dicarboxylic acids in solvent at a temperature from 40°C to 150°C with refluxing.

31. (new) A three-dimensionally networked silica according to claim 30, wherein connecting materials are diisocyanates having methylene chains of C₆-C₁₀₀.

32. (new) A three-dimensionally networked silica according to claim 30, wherein the silane is 3-glycidyloxypropyltrimethoxy silane, and the connecting materials are diaminoalkanes or diisocynatoalkanes.